

# Jennifer Mankoff

Associate Professor, HCI Institute, Carnegie Mellon University

2/20/09

## ADDRESS

Human-Computer Interaction Institute  
Carnegie Mellon University  
Newell-Simon Hall, Rm 2504A  
5000 Forbes Ave  
Pittsburgh, PA 15213

## CONTACT INFORMATION

(412) 268-1295  
jmankoff@cs.cmu.edu  
<http://www.cs.cmu.edu/~jmankoff>

## RESEARCH INTERESTS

I am interested in addressing critical social problems by leveraging interactive technologies to empower people. Put another way, technology, or more specifically, the creators of technology, have the potential to change for the better what humans, individually or as a group, are capable of. My work has focused on creating accessible new mobile, desktop and web technologies to help individuals. While applications development has been one focus of my work, I have also put significant effort into developing enabling tools and processes. My goal is to lower the floor for developers and evaluators to create empowering technology by making it easier to evaluate and build applications that are accessible and usable, both on and off the desktop.

## EDUCATION

2001 PhD, Computer Science [T.2]. Georgia Institute of Technology, College of Computing Atlanta, GA.

**Thesis Advisors:** Gregory Abowd and Scott Hudson

1995 BA, Computer Science [T.1]. Oberlin College, Oberlin, OH. High Honors.

1991 HS. Green Meadow Waldorf School, Spring Valley, NY.

## EMPLOYMENT

**F 2008 – present Associate Professor, CMU, Pittsburgh, PA**

**F 2004 – S 2008 Assistant Professor, CMU, Pittsburgh, PA**

**F 2001 – S 2004 Assistant Professor, UC Berkeley, Berkeley, CA**

Focus is on increasing our fundamental understanding of the barriers to diversity, and developing tools and techniques that address them. Current projects include investigations of glanceability in peripheral displays, tools for evaluating ubicomp systems, and techniques for assessing accessibility problems. [C.7-C.31, J.2-J.9]

**Su 2000 Research Assistant, Georgia Tech, Atlanta, GA.** Drs. Moore & Mynatt

Investigated training and user interface techniques supporting disabled users with extremely limited input channels [C.6]

**S 2000 Teaching Assistant, Georgia Tech, Atlanta, GA.** Dr. Potts

Introduction to HCI.

**F 1999 – S 2000 Research Assistant, Georgia Tech, Atlanta, GA.** Dr. Abowd

**Su 1999 Research Assistant, CMU, Pittsburgh, PA.** Dr. Hudson

**F 1998 – F 1999 Research Assistant, Georgia Tech, Atlanta, GA.** Dr. Abowd

Investigated the toolkit-level infrastructure needs inherent in recognition-based input [C.4, C.5, J.1]

**Su 1996 Research Assistant, FX Pal, Palo Alto, CA.** Dr. Schilit

Investigated placement of computing resources around office place at “points of need”. Experimented initially with paper prototype, then touch-screen displays [C.1]

**F 1995 – Su 1997 NSF Traineeship Recipient, Georgia Tech, Atlanta, GA**

Investigated computing in the home, specifically focusing on bringing techniques for bringing physically separated people and places together [C.2]

**Su 1994 Research Assistant, AT&T Bell Labs, Naperville, IL. Dr. Wills**

Designed and implemented C++ object hierarchy to display simple, colorful, interactive, graphs of univariate data (*e.g.*, histogram, boxplot, barplot).

**Su 1993 Research Assistant, Argonne National Laboratories, Argonne, IL. Dr. Gaasterland**

Designed and implemented general graphical user interface for biological genobase databases. Also extended phylogenetic tree visualization program to encode data using color.

**F 1992 – S 1995 Teaching /Research Assistant, Oberlin College, Oberlin, OH.**

Worked with students in undergraduate classes including pre-calculus, introduction to programming, introduction to graphics, programming languages, calculus and algorithms. Work included tutoring, grading, recitations and curriculum development with goal of “leveling the playing field” for students with diverse backgrounds. Also gave regular seminars on topics including EMACS, UNIX and repetitive strain injury.

**PERSONAL**

**1997 – 2000** Canine Companions for Independence: Trained guide dogs for work with people with disabilities.

**1995 – present** Chamber music. Won audition for noon concert series at UC Berkeley, Spring, 2004. Also, at various times Orchestra member and Viola/Piano Teacher

**1990 – present** Artist, with focus on craft-based artifacts.

**EVIDENCE OF EXTERNAL REPUTATION**

**CITATIONS AND AWARDS**

- **2007 Nominated for MIT Technology Review Magazine’s** top innovators under 35 award
- **2007 Alfred P. Sloan Research Fellow** \$45,000
- **2006 IBM Faculty Fellowship** \$30,000, “Adaptive Assistance: Dynamically tailoring assistive technologies for interactive computer users”
- **2005 CHI Best Paper Nomination**, Carter and J. Mankoff. When participants do the capturing: The role of media in diary studies. In *Proceedings of CHI 2005*, pp. 899-908.
- **2004 IBM Faculty Fellowship** \$40,000, “Tools for supporting early-stage, accessible design”
- **2000 IBM Graduate Fellowship**
- **2000 Intel Fellowship** (declined in favor of IBM).
- **2000 CHI Doctoral Consortium** participant
- **1999 & 2000 Human Computer Interaction Consortium** Nominated attendee.
- **1995 Elected to Sigma Xi**, Science Honor Society.
- **F 1995 – S 1997 NSF Traineeship Fellowship** (two year fellowship to study Human Computer Interaction). Investigated Computing in the Home. [C.1, C.2]
- **1994 Elected to Phi Beta Kappa**, Honor Society.

## INVITED TALKS, SEMINARS & COLLOQUIA

- 2009 *TBD* Invited speaker at the Grace Hopper Conference on Women and Computing, Tuscon, AZ.
- 2009 *Impact of Online Information on Individuals with Lyme disease: Potential and pitfalls*. Invited talk at the Greater New York Lyme Neuroborreliosis Support Group, New York, NY.
- 2008 *Facebook and A Polar Bear may persuade people to pare down their energy use*. Invited Google Tech Talk (<http://www.youtube.com/watch?v=9ftlw8ja1iQ>) and Intel Research Colloquium Talk
- 2007 *Leveraging social networks to motivate voluntary change in energy use*. Invited talk at the first conference on Behavior, Energy and Climate Change Conference, Sacramento, CA.
- 2006 *Flexible, mobile and responsive techniques for making important audio events available visually*. University of Pittsburgh, Pittsburgh, PA.
- 2006 *Exiting the Cleanroom: Tools and techniques for situated iterative design of Ubiquitous Computing applications*. Microsoft Research, Seattle, WA. (<http://www.researchchannel.org/prog/displayevent.aspx?rID=4913&fID=569>)
- 2004 *Making Accessibility Accessible to Designers*. IBM T. J. Watson, Hawthorne, NY.
- 2003 *A Research Agenda for Ambient and Peripheral Displays*. Fx Palo Alto. With Anind Dey.
- 2003 *Experiences as a woman in Computer Science*, Stanford Speaker Series for Women in Computer Science, Stanford University, CA.
- 2002 *Ambiguity in User Interfaces: Representations and Resolutions* San Jose State CoE Engineering Seminar.
- 2002 *An Architecture and Interaction Techniques for Handling Ambiguity in Recognition-based Input*. Sonoma State University.
- 2002 *When user interfaces and users don't match up: Automating universal access* International Computer Science Institute, Berkeley, CA.
- 2000 *Interface Techniques for Handling Recognition Errors and Ambiguity in Recognition-based Input*. University of Maryland Human Computer Interaction Laboratory (HCIL), Fall 2000 Seminar series. 2000.
- 2000 *Programming support for natural interaction*. Job talk. Given at: UC Berkeley, Georgia State, Harvard, UC Boulder, IBM, Indiana University, Karlsruhe, University of Maryland, Northwestern, NYU, Stanford, UIUC, University of Washington, and SFU.

## NEWS ARTICLES & OTHER COVERAGE

- [N.11] Ada Lovelace Day, Scott Carter, March, 2009.  
<http://palblog.fxpal.com/?p=496>
- [N.10] Centerpiece of High End Computing: Cell Phones, ABC News, November, 2008
- [N.9] Carnegie Mellon's StepGreen tracks our sustainable lifestyle, Debra Smit, Pop City, July, 2008
- [N.8] OurSpace (Talk of the Quad), Peter Frick-Wright, Sierra Club Magazine, November/December 2006.  
<http://www.sierraclub.org/sierra/200711/coolsschools/talk.asp>
- [N.7] What Happened?, Lisa Steinfeld, i711.com, March, 2006.  
<http://www.i711.com/my711.php?tab=2&article=6>

- [N.6] EECS professors design 'aware chair' communication system for physically and speech-impaired, Engineering News, January 20, 2003, Vol 73 No. 1S.  
<http://www.coe.berkeley.edu/engnews/fall02/1S/Awarechair.html>
- [N.5] Able Computing, Oberlin Alumni Magazine,  
[http://www.oberlin.edu/alummag/fall2003/notes\\_03.html](http://www.oberlin.edu/alummag/fall2003/notes_03.html)
- [N.4] Ambient Displays that Don't Distract, David Pescovitz, Berkeley Engineering Lab Notes, May, 2003. <http://www.coe.berkeley.edu/labnotes/0503/mankoff.html>

### **Safe.millennium.berkeley.edu coverage (N.1-N.3)**

Helped to create <http://safe.millennium.berkeley.edu> website to help people find out if friends and family were safe in the aftermath of September 11th.

Website is archived at:

<http://web.archive.org/web/20010919065820/safe.millennium.berkeley.edu/>

Website was mentioned in numerous articles around the world shortly after 9/11, including Newsbytes news network, and the International Herald Tribune (see [N.1]), as well being mentioned on ABC by Peter Jennings and posted on CNN, Yahoo and MSNBC. Project was also featured on Business Newswire, as well as in several UC Berkeley news articles [N.2] and discussed in academic venues [N.3].

- [N.1] News articles mentioning [safe.millennium.berkeley.edu](http://safe.millennium.berkeley.edu)
- Help Sites Spring Up In Aftermath Of WTC Assaults, Steve Gold, Newsbytes News Network, 9/12/01
  - While phone lines went down in New York, people flocked to the net, Andy Farquarson, Guardian Unlimited, UK, 9/20/01 <http://www.guardian.co.uk/Archive/Article/0,4273,4260488,00.html> (just mentions site, not directly discussed)
  - Internet Sites Offering More Information, International Herald Tribune, 9/13/01
  - Net in aid of attack victims' kin, Raman Mohan, Tribune, India, <http://www.tribuneindia.com/2001/20010920/haryana.htm#1>
  - Internet becomes only link after cell phones fail, Kevin Coughlin, The Star Ledger, 9/12/01 <http://www.nj.com/specialprojects/index.ssf?/specialprojects/terror/internetcell.html>
  - Web Site Lists Safety Of Loved Ones Following Terrorist Attacks, Science Daily, 9/13/01 <http://www.sciencedaily.com/releases/2001/09/010913075428.htm>
  - Universities nationwide help victims, Maria Sprow, Michigan Daily, 9/18/01
  - Disaster sets web humming, webmasters, users scrambling, Steve Caulk News Staff Writer. Rocky Mountain News. Denver, Colo.: Sep 17, 2001. pg. 1.B
  - E-Business: The Web at Its Worst: Pranks Turn Cruel, Rage Finds Outlets, Dennis Berman. Wall Street Journal (Eastern edition). New York, N.Y.: Sep 17, 2001. p. B.6
- [N.2] News articles focused specifically on [safe.millennium.berkeley.edu](http://safe.millennium.berkeley.edu)
- UC Berkeley Professor, Students, Create Web Site to Help Public Know If Loved Ones are Safe Following Today's Terrorist Attacks, News Editors, Business Wire, 9/11/01 [http://www.findarticles.com/p/articles/mi\\_m0EIN/is\\_2001\\_Sept\\_11/ai\\_78135107](http://www.findarticles.com/p/articles/mi_m0EIN/is_2001_Sept_11/ai_78135107)
  - Web Site Helps Families, Friends Track Loved Ones, Robert Sanders and Cyrus Farivar. Berkleyan: 20 September 2001. [http://www.berkeley.edu/news/berkeleyan/2001/09/20\\_web.html](http://www.berkeley.edu/news/berkeleyan/2001/09/20_web.html) (articles also appeared in other UC venues including California Alumni)

[http://www.alumni.berkeley.edu/Alumni/Cal\\_Monthly/November\\_2001/After\\_September\\_11-\\_The\\_campus\\_responds\\_.asp](http://www.alumni.berkeley.edu/Alumni/Cal_Monthly/November_2001/After_September_11-_The_campus_responds_.asp), the Daily Californian  
<http://www.dailycal.org/sharticle.php?id=6255>, and OCUP news  
<http://www.ucop.edu/news/archives/2001/sept12art3.htm>)

- [N.3] Academic articles by others mentioning or featuring [safe.millennium.berkeley.edu](http://safe.millennium.berkeley.edu)
- Campuses Near World Trade Center Plan to Resume Classes; Elsewhere, Flag-Waving and Retaliation Are Debated, Dana Mulhauser, the Chronicle of Higher Education, 9/18/01.
  - Operating an Emergency Information Service, Ka-Ping Yee, Communications of the ACM, 44(12): 25-28, Dec 2001.
  - The Internet in the Aftermath of the World Trade Center Attack, Briavel Holcomb, Philip B. Bakelaar, Mark Zizzamia, Journal of Urban Technology, 10(1):111-128, April, 2003.

#### **Quoted in...**

[Q.2] Quoted in Nature, "Artificial intelligence: Fast hands-free writing by gaze direction" (Lidia Pringle), Aug. 22, 2002.

[Q.1] Quoted in New York Times, "Glass that Glows and Gives Stock Information" (Barnaby Feder), June 10, 2003.  
<http://nytimes.com/2003/06/10/technology/10AMBI.html?8hpib>

## **PROFESSIONAL ACTIVITIES AND SERVICE**

### **EDITORIAL BOARD MEMBERSHIPS; PROGRAM COMMITTEES; AND OTHER REVIEWING SERVICE**

- Editorial Board, ACM Transactions on Accessible Computing (2006 to present)
- Invited Co-editor, Pervasive Magazine, Special Issue on Environmental Sustainability, January-March 2009.
- Program Committee Member: ACM ASSETS '07,'05,'00; ACM CHI '03, ACM UIST '08, '06, '02, '01, Ubicomp '07, Design and Evaluation of Ambient Information Systems (Workshop at Pervasive '07)
- Reviewer (Conferences and Journals): ACM CSCW, UIST, CHI; Graphics Interfaces; Ubicomp; Communications of the ACM; IT & Society; HCI Journal; Interacting with Computers; IEEE Pervasive; Transactions on Computer-Human Interaction
- NSF Panelist: Computing Research Infrastructure Panel 2007

### **CONFERENCE AND WORKSHOP AND SIG VOLUNTEER WORK**

- SIGACCESS Vice President (2004-2006)
- Registration/Student Volunteer Chair ACM ICMI-PUI 2003, (with Anind Dey)
- Doctoral Consortium Chair ACM ASSETS 2002
- Student Volunteer Chair ACM UIST 2000

### **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

- Association for Computing Machinery (SIGCHI, SIGACCESS)
- American Association of University Women

## UNIVERSITY AND DEPARTMENT SERVICE AND COMMITTEE WORK

- Curriculum Committee, HCII, CMU 2009, 2004-2007
- Orientation Coordinator, HCII, CMU, 2006
- Graduate Admissions Committee, HCII, CMU 2004-2006
- Helped to organize regular meetings of female engineering faculty at both UCB and CMU, 2002-2006
- Disability Studies Advisory Board, UC Berkeley 2002, 2003, 2004
- RSI Lending Library Coordinator, Georgia Tech (1995-2001); UC Berkeley (2002-2004)
- Undergraduate Study Committee, EECS, UC Berkeley 2003, 2004
- Graduate Admissions Committee, EECS, UC Berkeley 2002, 2003
- Undergraduate Advising Committee, EECS, UC Berkeley 2002, 2003

## CONTRIBUTIONS TO EDUCATION

### COURSES TAUGHT AT CARNEGIE MELLON

- S 2009, S 2007 **Computer Science Perspectives in HCI**: a seminar-style deep exploration of the innovations and challenges that have been tackled by the pioneers of our field over the past 60 years.
- F 2008, F 2007, F 2004 **Process and Theory**: Introduction to Graduate Research. Covers multidisciplinary research, skills, and includes a project.
- F 2007 **Methods** (co-taught with John): Required introduction to HCI evaluation methods taken by Masters students and 2<sup>nd</sup> Majors.
- S 2005 **Assistive Technology and Accessibility**: Graduate Seminar, designed curriculum. Typically includes extremely diverse, cross-disciplinary students and community members. Included service learning.

### COURSES TAUGHT AT UC BERKELEY (UCB)

- F 2003 **Teaching Hearing Technology to the Hard of Hearing**, DeCal course: Faculty adviser, taught students to work with and for hard of hearing people, learning and teaching about hearing technology.
- F 2003, 2002 **Human Computer Interaction**, EECS Dept: Undergraduate course. Included service-learning theme.
- S 2003 **Partnership in Education**, DeCal course: Faculty adviser, mentoring class for local disabled community college students
- S 2003 **Designing Technology for Girls and Women**, Freshman Seminar: With Dr. Agogino. Co-listed in Engineering and Women's Studies. Included service learning.
- S 2003 **Human Computer Interaction**, EECS Dept.: Graduate course. Focused on Research Methods
- S 2002 **Assistive Technology and Accessibility**: Graduate Seminar. Typically includes extremely diverse, cross-disciplinary students and community members. Included service learning.

### CURRICULUM DESIGN

- **Computer Science Perspectives in HCI, 2006-2009**: Designed curriculum for a seminar-style deep exploration of the innovations and challenges that have been tackled by the pioneers of our field over the past 60 years. The intersection of humans and computation has reflected dramatic changes in technology over time,

from the vision of Vannevar Bush to the ability to predict human interruptibility with sensors.

- **Process and Theory, 2004-2009:** Helped to re-design the curriculum for the introduction to graduate studies to ensure that it covers key skills needed for success in the graduate program, including issues from skimming papers and writing literature surveys to research ethics.
- **Assistive Technology, 2002-2005:** Designed curriculum for assistive technology and accessibility course. Focused on educating engineering, computer, and human computer interaction students about disability studies, and encouraging diverse, cross-disciplinary projects. No similar course to base this on, it combines aspects of disability studies, rehabilitation, computer science, and Human Computer Interaction.

## OTHER

- **Undergraduate research experience, 2001-2005:** Explored different models for mentoring undergraduates, especially during early stages of their career, and exposing them to research. General model involves a combination of regular advising and exposure to skills and topics ranging from how to interview to time management, along with participation in a research project. Many of the undergraduates involved in different variations on this effort have gone on to top PhD programs including HCII (Julia Schwartz, Gary Hsieh and Ruth Wylie); SIMS (Morgan Ames and Tu Tran); and Stanford (Lisa Chan); while many others have gone on to successful jobs, other degrees, or other fields. Many students expressed the value of this approach to me, and as an example, one student currently working at NASA said “I don't think I ever properly thanked you for opportunities and encouragement you provided while I was working on the Nutrition project... my time with the I/O group was very formative and definitely helped me with future research endeavors,” (Eric Park) while another student recently emailed “Thank you for all the ways you've supported and encouraged us. You have definitely been someone who has made an impact in my life and I'm forever grateful.” (Hanyi Wang)
- **Clinical Module (F06-F07)** Providing technical information for the planning of a new course on clinical and translational research as part of the University of Pittsburgh's new Multidisciplinary Clinical Research Scholar's Program.
- **Gender and design (S03)** Explored issues of gender among first year engineers, leading to publication: [J.3].
- **Service Learning (S02-S04)** Experimented with Service learning in four courses over 2 years. Research conducted during this time was published as an experience report at CHI [O.6], leading to contacts with faculty members at two other institutions who wished to use service learning in their own courses. One said “You reignited my desire to do service learning,” (Sophie Quigley, 5/1/06) while another said “after your CHI experience report I was inspired to try service learning myself.” (Khai Truong, 12/1/06)
- **Active Learning (S02; Summer 02)** CRA Academic Careers and Teaching Workshop (S02) and NSF New Century Scholars (Su 02) Attendee. Learned about teaching skills and active learning, methods applied to all classes.

## STUDENT ADVISING

### CURRENT PHD STUDENTS

**Julia Schwartz** (Co-advised with Scott Hudson, NSF Fellowship):

- Entering in 2009

**Tawanna Dillahunt** (GEM Fellowship):

- Entered in 2007
- PhD, in progress (Sustainability) [C.31, O.19, O.18]

**Amy Hurst** (Co-advised with Scott Hudson, NSF Fellowship):

- Entered in 2003
- PhD, in progress, “Automatically detecting user capabilities and needs.” (Assistive technology and ubiquitous computing) [C.23, C.25, C.27, C.28, C.29]

### COMPLETED PHD STUDENTS

**Scott Carter**

- PhD, Spring 2007, “Ubiquitous computing support for evaluation” [A.6, A.7, C.16, J.7, J.9, C.26]
- MS, Spring 2004: “The design of Hebb, a peripheral system supporting awareness and communication, and a study of its impact on small, distributed groups.” UC Berkeley. Masters Report. [J.4]
- Currently employed at FX Palo Alto

**Tara Matthews** (NSF Fellowship):

- PhD, Spring 2007: Evaluation of ambient displays [C.19, C.21, J.9, J.8, O.12]
- MS, Spring 2005: “Peripheral Display Toolkit: A toolkit for managing user attention in peripheral displays.” UC Berkeley. Masters Report. [A.4, C.15]
- Currently employed at IBM Almaden

### COMPLETED MASTERS STUDENTS

**Ana Ramirez** (co-advised with Mark Davis, SIMS; NSF Fellowship): MS, Fall 2005: “Designing systems that direct human action,” UC Berkeley, Masters Report, 2005.

**Scott Lederer** (co-advised with Anind Dey; NDSEG Fellowship): MS, Fall 2003: “Designing disclosure: Interactive personal privacy at the dawn of ubiquitous computing.” UC Berkeley. Masters Report, 2003. [T.5, U.3, C.10, C.12, T.6, T.7, U.7];

**Holly Fait** MS, 2003: “Simulation of user interaction experiences to improve evaluation for accessibility.” UC Berkeley, Masters Report, 2003. [J.5, C.18];

**Wai-Ling Ho-Ching** (Co-advised with James Landay): MS, 2003. “Can you see what I hear? The design and evaluation of a peripheral sound display for the deaf,” UC Berkeley, Masters Report, 2003. [C.13];

### UNDERGRADUATE SENIOR THESES AND RESEARCH PROJECTS

Have directly supervised over 30 students, many leading to publications [C.30, J.5, C.9, C.12, J.2, J.3, C.8, O.4]. Created experimental, sustainable undergraduate-only research project focused on peer learning (2001-2004, Nutrition project). Below, students that I directly supervised are listed, along with the number of years I supervised them and any awards or honors or publications. Masters students are listed in **bold**.

## COMPLETED HONORS THESES

**Catherine Grevet, 2009:** “Motivating Community-Oriented Behavior through an Online Social visualization,” Wellesley College. Undergraduate Honors Thesis.

**Ruth Wylie, ~2003:** “The Effects of Computers on Cognitive Assessment,” UC Berkeley. Undergraduate Honors Thesis.

**Devin Blais, ~2007:** “Green Facebook Applications: A competitive Analysis,” Carnegie Mellon University. Undergraduate Honors Thesis.

## UNDERGRADUATE PARTICIPATION ORGANIZED BY PROJECT

Publications listed are all authored by undergraduates involved with the project.

**ChronicWeb** (2008-present): Exploring the impact of the social web on the experience of chronic illness. Kateryna Kuksenok (W09, DMP Su09).

**StepGreen** (2006-present): Exploring human behavior change in the context of global warming. Creating a system for motivating consumers to reduce energy consumption. Catherine Grevet (DMP Su08), Julia Schwartz (DMP Su08) [C.30], Karalyn Baca (F07-S08, IFYRE), Aubrey Schick (Su06-Su07), William Wedler (Su06), Devin Blais (F06-present), Anish Mathur (F06-S07, IFYRE), Raye Gomez (DMP, Su07), April Wensel (DMP, Su07), Marty McGuire (Masters thesis, S07-present).

**Intel First Year Research (IFYRE) students** (2006-present): The IFYRE program aims to involve first and second year CMU students in research, and specifically targets minority students. Below is a list of IFYRE students I have advised/am advising. These students participate in a weekly group meeting, and additionally are assigned to a variety of research projects in my lab. Karalyn Baca (F07-Su08), Anish Mathur (F06-S07), Kelly Phouyaphone (F06-S07), Jenny Han (F06-S07), Austin Sung (F06-S07).

**Adaptabilities** (2002-present): Creating software that can sense and adapt to changing user needs. Aubrey Shick (Su06), Madhu Prabaker (Su06), Kelly Phouyaphone (F06-present, IFYRE), Jenny Han (F06-present, IFYRE), Austin Sung (F06-present, IFYRE). Also looking at novice/expert users. Jim Lin (Su06), Daniel Zinzow (Su06).

**Gendered aspects of engineering education** (2003): Project to explore gendered aspects of engineering education. Marisa Bauer (S03, “Certificate of Achievement” award for commitment to women’s issues in CS), [J.3].

**Talc** (2002-2003): Project to explore web accessibility for people with disabilities [J.2, J.5]. Group included undergraduate and masters students. Audrey Le (F02-S03); Tony Lai (F02-S04); Carol Pai (F03-S04); Ray Juang (F03-S04).

**Cognitive Assessment** (2002-2003): Project designed and led by a student to develop a computational tool for cognitive assessment. Ruth Wylie (F02-S03, Highest Honors, currently a CMU PhD Student).

**Nutrition** (2001-2003): Experimental undergraduate-only research project. Teaching goal was to develop a community of undergraduate researchers that is self-supporting (result was successful). Research goal is to design and evaluate system for reasoning about extremely ambiguous information; goal is to suggest nutritional lapses and persuade users to shop differently to address lapses [C.9].

Sharon Lee (F01-S04); Elizabeth Nitao (F01-S03); Gary Hsieh (F01-S02); Ho Chak Hung (F02-S03); Eric Park (F03-S04); Doris Lin (F02-S04); Hanyi Wang (S01-F03); Dana Wu (F02-S04); Anjali Koppal (F03-S04); Lexin Shan (F03-S04); Eric Diep (F03-S04).

**Ambient** (2001-2003): Project to explore applications, evaluation, and development of ambient and peripheral displays. Group included undergraduate, masters, PhD students and multiple faculty. [C.12, O.4].

**General Involvement** Lisa Chan (F01-S03); Steven Chan (F01-S02); Chinmayi Bettadapur (F01-S04, CREW); Gary Hsieh (S02-S03); Morgan Ames (F01-S03); Adebola Osuntogun (Su03, SUPERB).

**Evaluation** Project to explore evaluation of ambient displays. Gary Hsieh (F02-S04), Morgan Ames (F01-S03). [C.12]

**Healthy Cities** Project to develop public display of city health. Morgan Ames (F02-S03), Chinmayi Bettadapur (F02-S03). [O.4]

#### **PH.D. THESIS COMMITTEE SERVICE**

**Danny Fernandes**, In progress, CMU, Heinz School.

**Lisa Anthony**, 2008, CMU, Kenneth R. Koedinger (adviser). PhD Thesis.

**Jake Wobbrock**, 2006 “EdgeWrite: A versatile design for text entry and control.” Technical Report CMU-HCII-06-104, Carnegie Mellon University, July 2006. Brad Myers (adviser). PhD Thesis.

**Jimmy Lin**, 2005 “Using design patterns and layers to support the early-stage design and prototyping of cross-device user interfaces.” UC Berkeley, James A. Landay (adviser). PhD Thesis.

**Jennae Bulat**, 2005 “The role of print exposure in the development of early literacy skills among kindergarten students.” UC Berkeley, Anne Cunningham (adviser). PhD Thesis.

**Scott Klemmer**, 2004 “Tangible user interface input: Tools and techniques,” UC Berkeley, James A. Landay (adviser). PhD Thesis.

#### **M.S. THESIS COMMITTEE SERVICE**

**Christopher Beckmann**, 2004 “Transcate: Accountable interface techniques for context-aware applications,” UC Berkeley. Masters Report.

**Miriam Walker**, 2003 “High-Fidelity or Low-fidelity, paper or computer? Choosing attributes when testing web prototypes,” UC Berkeley, Masters Report, 2003; Assistive Technology Research

#### **OTHER**

Have mentored students through: IFYRE (CMU/Intel support for first and second year minority students), Computer Technologies Program (IT training for people with disabilities); CRA CREW and CRA-W (research experiences for undergraduate women); Berkeley SUPERB (undergraduate REU program); CHI student author program.

## **CONTRACT AND GRANT SUPPORT**

## **CURRENT**

- 8/08 J. Mankoff, H. S. Matthews, PITA, \$86,788: “Improving Household Awareness of Energy Use and Greenhouse Gas Emissions with Personalized Data Streams”
- 8/08 J. Mankoff, S. Fussell, and H. S. Matthews, NSF, \$450,000: “StepGreen: Mobilizing social networks and context awareness to motivate reduced energy consumption”
- 1/07 (3 years) J. Mankoff, S. Fussell, D. Matthews and M. Johnson, Intel Research, \$263,000, “Leveraging computational technologies to support behavior change”

## **PENDING**

- Submitted 3/09, J. Mankoff, S. Kiesler, \$300,000, “R. W. J. Foundation Proposal: How People Find Trustworthy Health Information Online”
- Submitted 3/09, J. Mankoff, S. Kiesler, \$100,000, “Google Research Proposal: Helping People Find Trustworthy Health Information Online”
- Submitted 2/09, J. Landay, S. Patel, J. Fogarty, J. Mankoff, S. Matthews, \$720,000 (CMU portion of budget), “Reducing Societal Energy Consumption Through Easily Deployable Personal Sensing”
- Submitted 1/09, J. Mankoff, S. Matthews, \$16,000, NSF REU Supplement to StepGreen grant.
- Submitted 12/08, J. Mankoff, \$492,079, “HCC Small: Helping People Negotiate Uncertain Information Online”
- Submitted 12/08, J. Mankoff and S. Hudson, \$493,023, “HCC Small: Pointing away from the Laboratory: Categorizing, Classifying and Adapting to Unscripted, Real World Pointing Activities of Typical and Special Needs Users”

## **PAST (FUNDED AND COMPLETED)**

- 1/08 A. K. Dey, J. Forlizzi, S. E. Hudson, J. Mankoff, Intel Research, Equipment grant: 8 MSP units.
- 1/08 J. Mankoff, S. Fussell, D. Matthews, Google Research Grant, \$60,000: “Google Grant Proposal: Energy Reduction through Personalized Suggestions on Social Networks”
- 5/08 J. Mankoff, S. Fussell, NSF REU supplement, \$12,000, SGER: Footprints: Exploring methods of personalizing suggestion for actions in an energy conservation social network site”
- 9/07 J. Mankoff, S. Fussell, D. Matthews, M. Johnson, NSF SGER IIS-0745885, \$96,610, “SGER: Footprints: Exploring methods of personalizing suggestions for actions in an energy conservation social network site”
- 9/07 J. Mankoff, Sloan Fellowship \$45,000, “Systems support for diversity”
- 9/06 J. Mankoff and S. Hudson, PITA \$43,468, “Adapting Computer Interfaces”
- 9/06 J. Mankoff, S. Hudson and R. Simpson QoLT ERC HSI Thrust, selected project, Two years of salary for Amy Hurst.
- 8/06 J. Mankoff, IBM Faculty Fellowship, \$30,000, “Adaptive assistance: Dynamically tailoring assistive technologies for interactive computer users”
- 5/06 J. Mankoff, NSF REU, \$12,000, Supplement to “Web Accessibility for Low Bandwidth Input”
- 5/04 J. Mankoff, MICRO award, \$66,556, “Evaluation for Universal Accessibility”

- 5/04 J. Mankoff, Intel Research, \$60,000, “Tools for supporting UbiComp Evaluation”
- 9/04 J. Mankoff, IBM Faculty Fellowship, \$40,000, “Tools for supporting early-stage, accessible design”
- 9/03 J. Mankoff, MICRO award, \$44,000 “Early-stage evaluation of Ubiquitous Computing Applications”
- 9/03 PI Eric Brewer, NSF ITR (5 years, \$2.6 mill) “A Scalable Enabling IT Infrastructure for Developing Countries”
- 9/03 J. Mankoff, Service Learning Mini-Grant, Service Learning R&D Center, \$1000.
- 6/03 J. Mankoff, NSF REU, \$12,000, Supplement to “Human-Centered Design of Context-Aware Computing”
- 6/03 J. Mankoff, URAP Program, \$2,000. Nutrition Project. With Doris Lin.
- 1/03 J. Mankoff, CITRIS Seed Grant, \$5,000, “Nutrition awareness & support”
- 1/03 J. Mankoff, HP Research, \$17,000, “Group awareness support”. Written with PhD. Scott Carter.
- 12/02 J. Mankoff, Intel Research, \$50,000, “UbiComp design and evaluation”
- 9/02 J. Landay, A. Dey and J. Mankoff NSF ITR IIS-0205644 (\$2.3 million, 5 P.I.’s), “Human-Centered Design of Context-Aware Computing: Scalability, Usability, and Privacy”
- 9/02 A. Dey and J. Mankoff, Collaborative Research Environment for Women (CREW) proposal, \$2,250, “Ambient Displays,” for Chinmayi Bettadapur and Morgan Ames. 19/41 accepted.
- 9/02 J. Mankoff, NSF IIS-0511895 (was IIS-0209213) on “Web Accessibility for Low Bandwidth Input” (3 years, extended to 4, \$240,000)
- 9/02 PI Alice Agogino, DiMI Program Opportunity Award 01-42, \$10,000: “Learning in the Palm of Your Hand” To run a workshop on learning using palmtop devices
- 4/02 J. Mankoff, Junior Faculty Research Grant, \$6,500, Committee on Research
- 1/02 J. Mankoff, CommerceNet grant of one summer student plus server machine, in association with PANGEA foundation, \$7,500

## PUBLICATION LIST

### NON-REFEREED ARTICLES, CHAPTERS IN BOOKS, ETC.

- [NR.2] J. Mankoff, R. Kravets, E. Bleviss. "Some computer science issues in creating a sustainable world," *IEEE Computer*. 41(8):102-105, August, 2008 (also published in the IEEE e-zine on energy and sustainability, [www.earthzine.net](http://www.earthzine.net), 11/17/08).
- [NR.1] J. Mankoff and A. K. Dey. "From Conception to Design: A practical guide to designing ambient displays" In *Public and Situated Displays*. K. O'Hara et al., eds. Kluwer Academic Publishers, 2003.

### REFEREED JOURNAL PAPERS - PUBLISHED

- [J.9] S. Carter and J. Mankoff and S. Klemmer and T. Matthews. "Exiting the cleanroom: On ecological validity and ubiquitous computing," *HCI Journal*. 23(1):47-99, 2008.
- [J.8] T. Matthews, J. Fong, F. W.-L. Ho-Ching and J. Mankoff. "Evaluating non-speech sound visualizations for the deaf," *Behavior and Information Technology*. 25(4):333-351, 2006.
- [J.7] S. Carter and J. Mankoff. "Prototypes in the wild: Lessons learned from evaluating three Ubicomp systems," *IEEE Pervasive Computing*. 4(4):51-57, 2005.
- [J.6] A. Dey and J. Mankoff. "Designing mediation for context-aware applications," *ACM Transactions on Computer-Human Interaction* (Special issue on Sensing-Based Interactions). 12(1):53-80, 2005.
- [J.5] J. Mankoff, H. Fait and R. Juang. "Evaluating accessibility through simulating the experiences of users with vision or motor impairments," *IBM Systems Journal*. 44(3):505-518, 2005.
- [J.4] Carter, S. and J. Mankoff and P. Goddi. "Building connections among loosely coupled groups: Hebb's rule at work," *Journal of CSCW*. 13(3):305-327, 2004.
- [J.3] C. Newman, M. Bauer, A. M. Agogino, J. Mankoff. "Perceptions of the design process: An examination of gendered aspects of new product development," *International Journal of Engineering Education*. 20(2), 2004. Also presented at the Mudd Design Workshop IV, "Designing Engineering Education." 10-12 July, 2003.
- [J.2] M. Y. Ivory, J. Mankoff and A. Le. "Using automated tools to improve web site usage by users with diverse abilities," *Information and Society*. 3(1):195-236, 2003.
- [J.1] J. Mankoff, G.D. Abowd and S.E. Hudson. "Techniques for handling ambiguity in recognition-based input," *Computers & Graphics* (Special Issue on Calligraphic Interfaces). 24(6):819-834, December, 2000.

### REFEREED JOURNAL PAPERS - ACCEPTED

### REFEREED CONFERENCE/WORKSHOP PAPERS

- [C.31] J. Froehlich, T. Dillahunt, P. Klasnja, J. Mankoff, S. Consolvo, B. Harrison, J. A. Landay, UbiGreen: Investigating a Mobile Tool for Tracking and Supporting Green Transportation Habits. In *Proceedings of CHI 2009*. pp. 1043-1052
- [C.30] J. Schwartz, J. Mankoff, H. Scott Matthews. Reflections of everyday activity in spending data. In *Proceedings of CHI 2009*. pp. 1737-1740

- [C.29] A. Hurst, J. Mankoff, S. E. Hudson. Understanding pointing problems in real world computing environments. In *Proceedings of ASSETS 2008*. pp. 43-50
- [C.28] A. Hurst, S. E. Hudson, J. Mankoff, S. Trewin. Automatically detecting pointing performance. In *Proceedings of IUI 2008*. pp. 11-19.
- [C.27] A. Hurst, J. Mankoff, A. K. Dey and S. E. Hudson. Dirty desktops: using a patina of magnetic mouse dust to make common interactor targets easier to select. In *Proceedings of UIST 2007*. pp. 183-186
- [C.26] S. Carter, J. Mankoff and J. Heer. Momento: Support for situated ubicomp experimentation. In *Proceedings of CHI 2007*. pp 125-134.
- [C.25] A. Hurst, S.E. Hudson and J. Mankoff, Dynamic detection of novice versus skilled use without a task model. In *Proceedings of CHI 2007*. pp. 271-280.
- [C.24] J. Mankoff, D. Matthews, S. R. Fussell and M. Johnson. Leveraging social networks to motivate individuals to reduce their ecological footprints. In *Proceedings of HICSS 2007*. pp. 87.
- [C.23] S. Carter, A. Hurst, J. Mankoff, and J. Li. Dynamically adapting GUIs to diverse input devices. In *Proceedings of ASSETS 2006*. pp. 63-70.
- [C.22] S. E. Hudson and J. Mankoff. Rapid construction of functioning physical interfaces from cardboard, thumbtacks, tin foil and masking tape. In *Proceedings of UIST 2006*. pp. 289-298.
- [C.21] T. Matthews, S. Carter, C. Pai, J. Fong and J. Mankoff. Scribe4Me: Evaluating a mobile sound translation tool for the deaf. In *Proceedings of Ubicomp 2006*. pp. 159-176.
- [C.20] D. Mankoff, A. Dey, J. Mankoff, and K. Mankoff. Supporting interspecies social awareness: Using peripheral displays for distributed pack awareness. In *Proceedings of UIST 2005*, pp. 253-258. Satire.
- [C.19] T. Matthews, J. Fong and J. Mankoff. Visualizing non-speech sounds for the Deaf. In *Proceedings of ASSETS 2005*, pp. 52-59.
- [C.18] J. Mankoff, H. Fait and T. Tran. Is your web page accessible? A comparative study of methods for assessing web page accessibility for the blind. In *Proceedings of CHI 2005*, pp. 41-50.
- [C.17] S. E. Hudson, J. Mankoff and I. Smith. Extensible input handling in the subArctic toolkit. In *Proceedings of CHI 2005*, pp. 381-390.
- [C.16] S. Carter and J. Mankoff. When participants do the capturing: The role of media in diary studies. In *Proceedings of CHI 2005*, pp. 899-908. Nominated for Best Paper Award.
- [C.15] T. Matthews, A. Dey, J. Mankoff, S. Carter, and T. Rattenbury. A toolkit for managing user attention in peripheral displays. In *Proceedings of UIST 2004*. pp. 247-256.
- [C.14] J. Heer, N. Good, A. Ramirez, M. Davis and J. Mankoff. Presiding over accidents: System mediation of human action. In *Proceedings of CHI 2004*, pp. 463-470.
- [C.13] W. Ho-Ching, J. Mankoff and J. Landay. Can you see what I hear? The design and evaluation of a peripheral sound display for the deaf. In *Proceedings of CHI 2003*, pp. 161-168.
- [C.12] J. Mankoff, A. Dey, G. Hsieh, J. Kientz, and S. Lederer. Heuristic evaluation of ambient displays In *Proceedings of CHI 2003* pp. 169-176.
- [C.11] J. Wang, and J. Mankoff. Theoretical and architecture support for input device adaptation. In *Proceedings of CUU 2003*. pp. 85-92.
- [C.10] S. Lederer, J. Mankoff and A. K. Dey. Who wants to know what when? Privacy preference determinants in ubiquitous computing. In *Extended Abstracts of CHI 2003*, Short Papers. ACM Press. pp. 724-725.

- [C.9] J. Mankoff, G. Hsieh and H.C. Hung and S. Lee and E. Nitao. Using low-cost sensing to support nutritional awareness. In *Proceedings of Ubicomp 2002*. Technical Note. October, 2002. pp. 371-378.
- [C.8] J. Mankoff, A. Dey, U. Batra and M. Moore. Web accessibility for low bandwidth input. In *Proceedings of ASSETS 2002*. pp. 17–24.
- [C.7] A. Dey, J. Mankoff, G.D. Abowd, and S. Carter. Distributed Mediation of ambiguous context in aware environments In *Proceedings of UIST 2002*, pp. 121–130. Originally published as “A.K. Dey, J. Mankoff and G.D. Abowd. Distributed mediation of imperfectly sensed context in aware environments. GIT GVU-Technical Report. #GIT-GVU-00-14. Summer, 2000.”
- [C.6] M. Moore, E. Mynatt, P. Kennedy and J. Mankoff. Nudge and shove: Frequency thresholding for navigation in direct brain-computer interfaces. In *Proceedings of CHI 2001 Conference Companion*. Technical Note. March, 2001. pp. 361-362.
- [C.5] J. Mankoff, S.E. Hudson and G.D. Abowd. Interaction techniques for ambiguity resolution in recognition-based interfaces. In *Proceedings of UIST 2000*, pp. 11-20
- [C.4] J. Mankoff, S.E. Hudson and G.D. Abowd. Providing integrated toolkit-level support for ambiguity in recognition-based interfaces. In *Proceedings of CHI 2000*, pp. 368-375
- [C.3] J. Mankoff and G.D. Abowd. Cirrin: A word-level unistroke keyboard for pen input. In *Proceedings of UIST'98*. Technical Note. November, 1998. pp.213-214.
- [C.2] J. Mankoff, J. Somers and G. D. Abowd. Bringing people and places together with dual augmentation. In *Proceedings of Collaborative Virtual Environments (CVE'98)*. Manchester, 1998. pp. 81-86.
- [C.1] J. Mankoff and B. Schilit. Supporting knowledge workers beyond the desktop with PALplates. In *Proceedings of CHI 97 Conference Companion*. Technical Note. March, 1997. p.550-551.

#### **ORGANIZED THE FOLLOWING WORKSHOPS, SIGS AND PANELS**

- [Org.4] J. Mankoff, J. Teevan, B. Bederson, G. D. Abowd. Organized Invited Discussion: Real Life and Real Work: Real Experiences Negotiating the Competing Needs of Illness, Disability, Children, and Work. CHI 2009.
- [Org.3] E. Blevis, E. M. Huang, J. Mankoff, L. P. Nathan, B. Tomlinson. Organized workshop on: Defining the role of HCI in the challenges of sustainability. CHI 2009, *Extended Abstracts of CHI 2009*. pp. 4827-4830.
- [Org.2] J. Hasbrouck, T. Igoe, J. Mankoff and A. Woodruff. Organized workshop on: Ubiquitous Sustainability: Technologies for Green Values. *Proc. Ubicomp 2007*, pp. 567-568.
- [Org.1] J. Mankoff, E. Blevis, A. Borning, B. Friedman, S. R. Fussell, J. Hasbrouck, A. Woodruff and P. Sengers. Organized SIG on: Environmental sustainability and interaction. CHI 2007 SIG, *Extended Abstracts of CHI 2007*. pp. 2121-2124

#### **OTHER CONFERENCE AND WORKSHOP PARTICIPATION**

- [O.19] T. Dillahunt, G. Becker, J. Mankoff, R. Kraut. Motivating environmentally sustainable behavior changes with a virtual polar bear. Presented at the workshop on Pervasive Persuasive Technology and Environmental Sustainability, *Pervasive'08*.
- [O.18] Froehlich, J., Consolvo, S., Dillahunt, T., Harrison, B., Klasnja, P., Mankoff, J., Landay, J. UbiGreen: Using Mobile Phones as a Persuasive Technology to Affect

- Daily Transportation Practices. Abstract accepted for presentation at *Behavior, Energy and Climate Change*, November, 2008.
- [O.17] J. Mankoff. Applying ethics to the practice, research, and teaching of Human Computer Interaction. Presented at the workshop on Reflective HCI: Articulating a Research Agenda for Critical Practice, *CHI 2006*.
- [O.16] J. Mankoff. Case study of Service-Learning for HCI: Practical guidelines for successful integration. Experience Report, *Extended abstracts of CHI 2006*, pp. 201-206.
- [O.15] S. Davidoff, S. Carter and J. Mankoff. Can early-stage tools and techniques for iterative design help researchers understand a problem space? Presented at the UbiApp Workshop, (What makes for good application-led research in ubiquitous computing), *Pervasive, 2005*.
- [O.14] S. Davidoff, C. Bloomberg, I. A. R. Li, J. Mankoff and S. R. Fussell. The book as user interface: lowering the entry cost to email for elders. *Extended Abstracts of CHI 2005* (Poster). pp. 1331-1334.
- [O.13] J. Mankoff and S. Carter. Crossing qualitative and quantitative evaluation in the domain of ubiquitous computing. Presented at the CHI Workshop on Usage Analysis: Combining logging and qualitative methods, *CHI 2005*.
- [O.12] T. Matthews and J. Mankoff. A toolkit for evaluating peripheral awareness. Presented at the CHI Workshop on Awareness Systems, *CHI 2005*.
- [O.11] Lederer, S., Mankoff, J, Dey, A.K. Towards a deconstruction of the privacy space. Presented at the UBICOMP 2003 Workshop on UbiComp Communities: Privacy as Boundary Negotiation, *UbiComp, 2003*.
- [O.10] W-L. Ho-Ching, J. Mankoff and J. Landay Using peripheral displays to provide the deaf with awareness of environmental audio. Presented at the Workshop on Providing Elegant Peripheral Awareness, *CHI 2003*.
- [O.9] A.K. Dey and J. Mankoff Applying heuristic evaluation to ambient displays. Presented at the Workshop on Providing Elegant Peripheral Awareness, *CHI 2003*.
- [O.8] M. Ames, C. Bettadapur, A. K. Dey and J. Mankoff. Healthy cities ambient displays. Student poster and extended abstract. *UbiComp 2003*.
- [O.7] A.K. Dey and J. Mankoff Evaluation of ambient displays to ambient displays. Presented at the Workshop on Design and Evaluation of Notification Displays, *UbiComp 2002*.
- [O.6] S. Lederer, A. K. Dey, and J. Mankoff Everyday privacy in ubiquitous computing environments. Presented at the Workshop on Socially-informed Design of Privacy-enhancing Solutions in Ubiquitous Computing, *UbiComp 2002*.
- [O.5] J. Hong, J. Landay, A.C. Long and J. Mankoff. Sketch recognizers from the designer's and the programmer's perspective. *AAAI Symposium on sketch understanding, 2002*.
- [O.4] J. Mankoff. Providing integrated toolkit-level support for ambiguity in recognition-based interfaces. In *CHI 2000 Conference Companion*, Doctoral Consortium. pp. 77-78.
- [O.3] Participated in Workshop on Designing the user interface for pen and speech multimedia applications. In *Proceedings of CHI Conference Companion*. p. 176. May, 1999.
- [O.2] J. Mankoff, J. Somers and G.D. Abowd. Bringing people and places together. Papers from the *AAAI Spring Symposium on Intelligent Environments*. Technical Report SS-98-02. March, 1998.
- [O.1] Seamless augmented environments on the scale of a building, a room and a desk. In Panel on Augmenting Home Environments, *ACM ASSETS 1998*.

## **THESES**

- [Th.2] J. Mankoff. An architecture and interaction techniques for handling ambiguity in recognition based input. Georgia Institute of Technology, Atlanta, GA. PhD Thesis. Gregory Abowd and Scott Hudson (co-advisors). Summer, 2001.
- [Th.1] J. Mankoff. IIC: Information in context. Oberlin College. Honors Thesis. Rhys Price-Jones (advisor). High Honors. Spring, 1995.

## **TECHNICAL REPORTS**

- [T.10] S. Carter and J. Mankoff. Momento: Early stage prototyping and evaluation for mobile applications Technical Report UCB-CSD-05-1380, Computer Science Division, University of California, Berkeley, April, 2005.
- [T.9] S. Carter and J. Mankoff. Challenges for ubicomp evaluation Technical Report UCB-CSD-04-1331, Computer Science Division, University of California, Berkeley, 2004.
- [T.8] G. Hsieh and J. Mankoff. A comparison of two peripheral displays for monitoring email: Measuring usability, awareness, and distraction Technical Report UCB-CSD-03-1286, Computer Science Division, University of California, Berkeley, October, 2003.
- [T.7] Lederer, S., Hong, J.I., Jiang, X., Dey, A.K., Landay, J.A., Mankoff, J. Towards everyday privacy for ubiquitous computing. UCB-CSD-03-1283, Computer Science Division, University of California, Berkeley, October 2003.
- [T.6] S. Lederer, J. Mankoff, and A.K. Dey Managing personal information disclosure in ubiquitous computing environments Technical Report UCB-CSD-03-1257 and IRB-TR-03-015, Computer Science Division, UC Berkeley and Intel Research Berkeley, July, 2003.
- [T.5] S. Lederer, A. K. Dey, and J. Mankoff. A conceptual model and metaphor of everyday privacy in ubiquitous computing environments. Computer Science Division, UC Berkeley and Intel Research Berkeley. UCB-CSD-02-1188 and IRB-TR-02-017. July, 2002.
- [T.4] J. Mankoff, J. Rowan, E.D. Mynatt, M. McJunkin and S.E. Hudson. Ten inch pixels: ambient art for remote awareness. GIT GVU-Technical Report GVU-01-07.
- [T.3] J. Mankoff, G.D. Abowd and S.E. Hudson. Interacting with multiple alternatives generated by recognition technologies. GIT GVU-Technical Report #GIT-GVU-99-26. August, 1999.
- [T.2] J. Mankoff and G.D. Abowd. Error correction techniques for handwriting, speech, and other ambiguous or error prone systems. GVU Technical Report #GIT-GVU-99-18. June, 1999.
- [T.1] J. Mankoff and G. Abowd. Domisilica: Providing ubiquitous access to the home. GIT GVU Technical Report #GIT-GVU-97-17, May 1997.

## **PATENTS AND INVENTION DISCLOSURES**

- [I.1] J. Mankoff, A system and method for mobile transcription and translation of speech, environmental sounds, or text, CMU Invention Disclosure 2006-097.

## **SOFTWARE ARTIFACTS**

- [A.8] StepGreen.org is a deployed social website supporting green behavior [C.24]
- [A.7] Momento supports the rapid creation of Ubicomp interfaces sufficient for evaluation. Based on a user centered design process, it addresses challenges found in Ubicomp evaluation. It supports peripheral monitoring of incoming

data, can leverage existing devices and provides integrated support for quantitative and qualitative data [T.10].

- [A.6] Reporter aids researchers performing diary studies that involve digital capture of media such as audio and photographs. It enables communication between study participants and researchers, and allows sharing and annotation of captured media [C.16].
- [A.5] EASE (Evaluating Accessibility through Simulation of user Experience) simulates the impact of motor impairments and low vision on computer use [J.5]. EASE can help developers identify disability-related usability problems early in the design process. EASE can also be used to allow fine-grained exploration of user capabilities that are difficult to account for, such as typing speed.
- [A.4] The Peripheral Display Toolkit (PDTk) provides structured support for managing user attention in the development of peripheral displays (a subset of Ubicomp applications that allow a person to be aware of information while she is attending to some other primary task or activity) [C.19].
- [A.3] IAT is a toolkit that can help applications to be optimized to the needs of people with motor impairments. It uses a formal model of input, based on Markov information sources, to translate a user's input to a form recognizable by any Windows-based application [C.11, C.23].
- [A.2] The Organized Option Pruning System (OOPS) is a toolkit that enables backwards-compatible inclusion of recognition based input in GUI interfaces. A major contribution of OOPS is its fine-grained control of the methods used by end users to resolve ambiguities due to recognition errors, through a process called mediation [J.6, T.2, C.5, C.4, J.1, O.2].
- [A.1] Cirrin is a novel, circular soft keyboard that supports pen input of ASCII characters using word-level unistrokes [C.3].